Nuclear power was the long-awaited propulsion source for the submarine. It turned the submersible surface ship into a true submarine, capable of almost indefinite operation. It was no longer bound to the earth's atmosphere.

In September 1947, Captain H. G. Rickover informally requested the first study of the application of a high-pressure, water-cooled reactor for a submarine. Personnel of the Daniels Pile Division at Oak Ridge, Tennessee, undertook that study.

In January 1948, the Department of Defense requested that the Atomic Energy Commission undertake the design, development, and construction of a nuclear reactor that would propel a naval submarine. In December 1948, the Commission contracted the Westinghouse Electric Corporation to develop design, construct, operate, and test a prototype nuclear propulsion plant. The outcome of those efforts was USS *Nautilus*.

REVIEW 5 QUESTIONS

Q1. What was the significance of the Battle of Coral Sea?

Q2. List the other major naval battles in the Pacific during World War II and describe their significance.

a.

b.

c.

d.

e.

Q3. Describe the role of the U.S. Navy in the Atlantic Ocean during World War II.

Q4. The shape of the Navy changed during World War II because of new ships introduced during this period. List some of the types of ships that were introduced during this period.

Q5. What is the significance of the date 30 July 1943?

Q6. What is the significance of the Women's Armed Services Integration Act?

THE NAVY FROM 1950 TO 1990s

Learning Objective: When you finish this chapter, you will be able to—

- Recognize the roles and responsibilities of the Navy from 1950 to 1990 to include the Korean Conflict, Vietnam, and the Persian Gulf.

Student Notes:

As the second half of the 20th century arrived, the United States had been at peace for 5 years, and the Navy was involved in many scientific pursuits. However, scientific and exploratory pursuits were interrupted by the outbreak of the Korean Conflict.

THE KOREAN CONFLICT

Supported by the United Nations, the United States agreed to give the Republic of Korea air and naval assistance. Three days after that decision, June 29, 1950, the cruiser USS *Juneau* and the destroyer USS *Dehaven* fired the first shots of the war.

When North Korea attacked south of the 38th parallel, the Navy was called on for close air support to knock out bridges and block enemy supply routes. Navy jets flew from carriers for the first time in a war situation. Unlike World War II, the enemy didn't have the capability to strike our carriers, so pilots launched their Corsairs and Banshees on the first sustained ground-support missions in history.

The helicopter also came of age during the Korean Conflict. First studied and developed in 1942 when the Navy received four Sikorskys, the choppers were spotters for artillery. In Korea, they flew emergency supply runs and took part in direct combat duties. Later, the helicopter was used as a cargo transport between ships during underway replenishment, search and rescue missions, and ASW exercises. Korea was the testing ground for the helicopter and many other innovations our forces currently use.

On September 15, 1950, under massive shore bombardment by U.S. Navy ships, the amphibious landings at Inchon began. The successful operation cut enemy communications, split enemy forces, and dissolved enemy resistance in that area. The shelling of supply roads far inland by the battleship USS *Missouri* demonstrated a new tactical concept. That concept was the Navy's ability to intervene successfully in a ground operation far ashore.

The Korean Conflict (fig. 5-13 and fig. 5-14) lasted until July 1953. Other events were happening in the Navy while the war was being waged. For example, a program was established giving outstanding enlisted women the opportunity to receive commissions in the Regular Navy.

KOREA TO VIETNAM

The 1950s was a time of change. By the end of the decade, most operational aircraft in the attack and fighter arsenals of the sea service were jets. More and more angled-deck carriers were authorized, and new deck-edge elevators allowed simultaneous takeoffs and landings.

The USS *Nautilus*, the first nuclear submarine, was first put to sea on January 17, 1955. Under Commander Eugene P. Wilkinson, the USS *Nautilus* transmitted the historic signal, "Underway on nuclear power." On its shakedown cruise in May 1955, the USS *Nautilus* steamed submerged from New London, Connecticut, to San Juan, Puerto Rico. It traveled over 1,300 miles in 84 hours—a distance 10 times greater than the record for continuously submerged travel by any previous submarine.

After more than 2 years of operation and evaluation, the USS *Nautilus* was refueled in April 1957. On its first nuclear core, it steamed a total of 62,562 miles; it made more than half of that cruise while totally submerged. A conventionally powered submarine the size of the USS *Nautilus* would have required over 2 million gallons of fuel oil to duplicate that feat. A train of tank cars over a mile and a half long would have been necessary to transport that amount of fuel.

On August 12, 1958, the USS *Nautilus* completed a history-making transpolar voyage from Pearl Harbor, Hawaii, to Portland, England. After diving under the ice near Point Barrow, Alaska, on August 1, 1958, it became the first submarine to reach the geographic North Pole.

Nuclear submarines produced after the USS *Nautilus* continued to pioneer new areas of submarine operations. The USS *Seawolf*, the Navy's second nuclear-powered submarine, operated as an active unit of the Atlantic Fleet. On October 6, 1958, it completed a record-breaking 60-day run, traveling a distance of 13,761 miles submerged.

While the USS *Nautilus* was still undergoing operational testing, the Navy began development of a ballistic missile of intermediate range. Brought from conception to initial operation in 5 years' time, the Polaris fleet ballistic missile (FBM) weapons system

Student Notes:

Photograph courtesy of Mr. Francis Jeffery.

Figure 5-13.—Korean War Memorial.

BMRF0514

Photograph courtesy of Mr. Francis Jeffery.

Figure 5-14.—Korean War Memorial—soldier.

was mated with nuclear propulsion. That development produced a virtually invulnerable missile-firing submarine. Today, the missile-firing submarine constitutes one of the highest priority elements of the United States' deterrent capability; that is, a deterrent to nuclear conflict.

Each Polaris submarine could launch 16 two-stage ballistic missiles powered by solid-fuel rocket motors, containing a self-contained inertial guidance system. The Polaris provided a combined explosive power greater than the total of all the bombs dropped by all aircraft during World War II. Nuclear propulsion enabled these Polaris submarines to remain on patrol for extended periods, hidden beneath the surface of the sea, ready to launch their missiles.

On station, a Polaris submarine maintained complete radio silence, receiving radio messages while submerged, but not transmitting to prevent giving away its location. Each ship had two complete crews, the Blue and the Gold, of about 130 people each. The Polaris operated on a system that reflected a major change in the Navy's traditional ship-manning methods. The crews alternated on approximately 3-month-long deployments, providing maximum on-station time for the submarine. Its endurance was limited only by the limitations of its personnel.

Submarines were followed by the world's first nuclear-powered surface warships. They were the guided-missile cruiser USS *Bainbridge*, launched April 15, 1961; the guided-missile cruiser USS *Long Beach*, commissioned September 9, 1961; and the carrier USS *Enterprise*, commissioned November 25, 1961. On October 3, 1964, those three ships ended Operation Sea Orbit, a 64-day long, around-the-world, unreplenished cruise.

It was during this time that space exploration (fig. 5-15) began. The *Vanguard*, a 3 ½-pound payload, was developed by the Naval Research Laboratory. On March 17, 1958, it was placed into orbit to test a system designed to launch earth satellites during the international geophysical year (IGY). Now the oldest man-made satellite in orbit, it is expected to remain aloft for 2,000 years.

Naval officers also participated in space exploration. On May 5, 1961, Commander Alan B. Shepard, Jr., made America's first suborbital flight. The 15-minute shot in *Freedom* 7 went 116.5 miles into space.

VIETNAM

Although the United States was at peace following the Korean Conflict, events were building that would plunge the country into another conflict. Since 1959, the French had been involved in fighting in a country most Americans had never heard of—Vietnam.

Americans were introduced to Vietnam in 1965. In that year, the United States entered the Vietnam Police Action. This police action, which caused conflict at home as well as on the battlefield, lasted until January 1973. Figures 5-16, through 5-19 commemorate American actions in Vietnam.

The Navy's operations in support of South Vietnam's struggle against communist military aggression consisted mainly of gunfire support and carrier aircraft operations. These operations included coastal interdiction patrols against North Vietnamese ships moving troops and supplies to the south. They also included riverine operations by a swarm of various types of patrol craft in the maze of waterways in South Vietnam's delta area. (By early 1972 all boats and the responsibility for delta operations had been turned over to the South Vietnamese Navy.) Naval construction battalions (Seabees) built several military bases and constructed water and sanitary facilities for local communities. Often, as in World War II, they engaged in fighting as they worked. Navy medical personnel served in the field with Marine Corps and Seabee units, as they did in World War II and in the Korean Conflict. They often performed their duties under fire and often sacrificed themselves to protect their charges from further harm. As in previous wars, U.S. Navy service and amphibious forces transported over 90 percent of the personnel and supplies used in support of that conflict.

During the Vietnam era, five new attack carriers joined the fleet, including the world's first nuclear-powered carrier, USS *Enterprise* (CVN 65).

Vietnam was a different kind of war, a war in which the Navy's role was ever changing. The Navy used both new and old aircraft—OV-10 *Broncos*, propeller-driven

Student Notes:

Figure 5-15.—Seven original NASA astronauts.

Skyraiders, attack planes like A-4 *Skyhawks* and A-7 *Corsairs*, and fighter planes like F-8 *Crusaders*. It used various support aircraft for ASW, early warning, and advance communications links.

OTHER DEVELOPMENTS

Even during the Vietnam Police Action, the Navy was involved in exploration and development. Former Navy pilot Neil Armstrong became the first man to set foot on the moon on July 20, 1969. On November 14, 1969, the all-Navy *Apollo 12* crew lifted off from the Kennedy Space Center on the second lunar expedition.

Student Notes:

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Photograph courtesy of Mr. F4rancis Jeffery.

Figure 5-16.—The Wall .

BMRF0517

Photograph courtesy of Mr. Francis Jeffery.

Figure 5-17.—Vietnam Memorial.

The crew consisted of Commanders Charles Conrad and Richard Gordon and Lieutenant Commander Alan Bean. Another all-Navy crew (Captain Charles Conrad, Jr., and Commanders Joseph P. Kerwin and Paul J. Wietz) splashed down on the first Skylab mission on June 22, 1973. The crew set numerous records and accomplished virtually all of its objectives.

Space. The Navy stands tall in the first 10 years of manned space exploration. Records show that five of the six men to walk on the surface of the moon during that time had formerly been trained as naval aviators.

Research. In the 1960s, Navy scientific undersea research resulted in the USS *Alvin*. The USS A*lvin* was the Navy's first deep diving vehicle. It was successfully tested at 6,000-foot depths on July 20, 1965. The next month, 10 aquanauts, including astronaut Commander M. Scott Carpenter, entered the Sealab II capsule, 205 feet below the surface of the sea off the coast of La Jolla, California. Carpenter remained underwater for 30 days in a successful experiment of submerged living and working conditions. On January 25, 1969, the first nuclear-powered, deep-submergence research and ocean-engineering vehicle, NR-1, was launched. That five-man vessel can operate for weeks at a time at great depths.

Student Notes:

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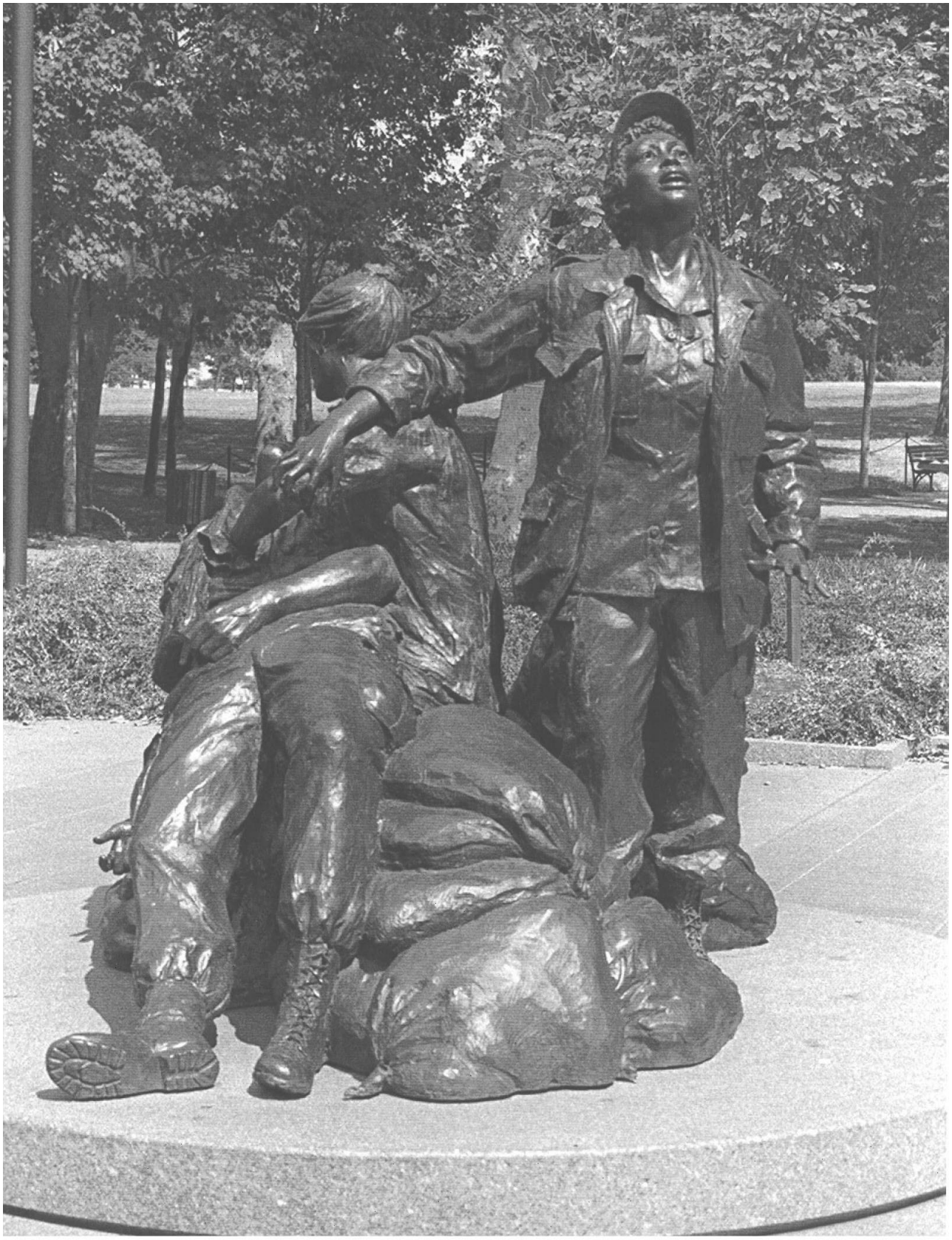
Photograph courtesy of Mr. Francis Jeffery.

Figure 5-18.—Vietnam Memorial—soldier.



BMRF0519

Photograph courtesy of Mr. Francis Jeffery.

Figure 5-19.—Women in war—memorial.

Weapons. In early 1965 came the announcement of the proposal to develop a new missile for the fleet ballistic missile system—the Poseidon. The growth potential of the ballistic missile submarine launching system has enabled the Poseidon to fit into the same 16-missile tubes that carried the Polaris. Like the Polaris A-3, it is able to reach any spot on earth from its nuclear-powered hiding place. Its increased accuracy, greater payload, and improved ability to penetrate enemy defenses make the Poseidon more effective than the Polaris.

On July 19, 1974, construction of the new Trident undersea nuclear weapons system commenced. The Trident system consists of three principal elements: a nuclear-powered fleet ballistic missile submarine (SSBN), a strategic weapons system (the missile), and an integrated logistics support system. The first Trident submarine was the USS *Ohio* (SSBN-726), a nuclear powered fleet ballistic missile submarine. The USS *Ohio* was delivered to the Navy in 1981. Since then, the Navy has accepted delivery of 10 more Trident submarines.

THE PERSIAN GULF

As with other wars, conflicts, or areas of military aggression, U.S. naval forces operate in the hostile area of the Persian Gulf. U.S. naval forces have been present in this vital oil-rich region for many years.

The events leading to an increased number of U.S. naval units in the Persian Gulf (fig. 5-20) began in the mid 1980s. Iran and Iraq were at war. Iraq had begun attacking Iranian oil facilities and tankers; in response, Iran began attacks against ships flying flags of countries sympathetic to Iraq. U.S. Navy ships quickly began escort and protection operations for U.S.-flagged tankers.

BMRF0520

Figure 5-20.—Persian Gulf award.

As the war between Iran and Iraq widened, so did the dangers to U.S. Navy ships operating in the Gulf. Iran started laying mines in the Gulf and began using small suicide boats to raid U.S. tankers and naval units. Iraq also possessed weapons that could cause tremendous damage and casualties. These weapons proved costly to the United States. In May 1987, an Iraqi aircraft mistakenly fired two missiles that struck USS *Stark* (FFG-31), killing 37 sailors and wounding many more. In April 1988, Iran's use of mines caused considerable damage to USS *Samuel B. Roberts* (FFG-58). Until that time, the U.S. Navy's presence was largely defensive. When forced to take offensive action, the United States acted quickly. U.S. Navy ships bombarded an Iranian oil platform being used as a command post and sank a mine-laying vessel carrying out operations.

DESERT SHIELD/DESERT STORM

On 2 August 1990, the president of Iraq Saddam Hussein, ordered the world's fourth largest army from Iraq to invade the country Kuwait. The United States deployed a major joint force which served as the foundation for a powerful 33-nation military coalition to stem Iraq's brutal aggression. Operation Desert Shield/Desert Storm was born. The United States Navy provided the sea control and maritime superiority that paved the way for the introduction of U.S. and allied air and ground forces. The United States offered strong leadership for the multinational naval force.

Desert Shield/Desert Storm brought together the largest force of Navy warships assembled in a single theater since World War II, adding a powerful punch to Navy forces already on scene the night of Iraq's invasion of Kuwait. Long-established maritime superiority facilitated the largest, fastest strategic sealift in history, with more than 240 ships carrying more than 18.3 billion pounds of equipment and supplies to sustain the forces of Desert Shield/Desert Storm.

Under the Navy's Total Force concept more than 21,000 naval reservists were called to active duty in

Student Notes:

support of Desert Shield/Desert Storm. Serving in specialties from medicine to mine warfare, reservists worked alongside their active duty counterparts in the Persian Gulf. Others filled critical vacancies on the home front.

Saddam Hussein's rejection of diplomatic efforts to solve the crisis led to the final decision to restore Kuwait's sovereignty by military force. The ensuing air war and the effects of the economic embargo decimated Iraq's military infrastructure, severed communication and supply lines, smashed weapons arsenals, and destroyed morale. Some of the first shots fired were from Navy ships in the Persian Gulf and Red Sea, as they launched salvos of Tomahawk cruise missiles against pre-programmed targets in Iraq.

After an impressive 38-day air campaign, the ground offensive began with allied forces sweeping through Iraqi defenses in blitzkrieg fashion. The allied push into Kuwait and southern Iraq was made easier by the amphibious forces on station in the Persian Gulf. The threat they posed forced tens of thousands of Iraqi troops to maintain positions along the Kuwaiti coastline to defend against attack from the sea. The Iraqi army was crushed after a mere 100 hours. Iraqi troops—tired, hungry and war-weary from 6 months of economic blockade and more than a month of relentless allied bombing—surrendered by the thousands. Less than 7 months after the Iraqi invasion, Kuwait was once again free.

It is likely that Navy ships will continue to represent and protect U.S. interests in the region for the foreseeable future.

REVIEW 6 QUESTIONS

Q1. List some of the Navy's roles during the Korean Conflict.

a.

b.

c.

d.

Q2. List some of the Navy's missions during the Vietnam Police Action.

a.

b.

c.

Q3. What are other actions the Navy was involved with during the same timeframe as the Vietnam Police Action?

a.

b.

Q4. What service did the Navy provide during the Iraq – Iran War?

Q5. List the Navy's contributions during Operation Desert Shield/Desert Storm.

a.

b.

c.

SUMMARY

The United States Navy began more than 200 years ago with two ships, but today we are the finest naval force in history. The history of the Navy is a big story and an exciting one. We've only rippled the surface here, but maybe we've stimulated your curiosity enough that you will want to take a closer look at your Navy's past. If so, visit your ship or station library. You will find many fine books on naval history there.

From Flamborough Head to the Persian Gulf, the U.S. Navy has always been "on station" in time of trouble. The U.S. Navy's mission of preparedness to conduct prompt and sustained combat operations at sea means the U.S. Navy will be present at the first sign of conflict.

Student Notes:

U. S. Navy ships continued to change with even greater momentum, ushering in another new era—that of nuclear propulsion, jet power, rockets, and guided missiles. New types of ships have emerged—ships such as guided-missile cruisers, tactical command ships, and helicopter flattops. The era of the 50s, 60s, 70s, 80s, and on into the 90s has seen the emergence of the nuclear Navy.

The heart of today's nuclear fleet is a highly complicated unit known as the nuclear reactor, which offers the following advantages:

- Almost unlimited steaming endurance at high speed. Nuclear ships have increased flexibility; an ability to obtain ammunition, aviation fuel, and other supplies from remote places in a minimum amount of time; and an attack ability in a much greater area.
- Reduced vulnerability. Nuclear ships need not remain exposed as long as nonnuclear vessels during replenishment. They can maneuver to avoid attack.
- Reduced dependence on logistic support. Nuclear ships require fewer mobile support forces.
- Greater attack effectiveness. Nuclear ships can remain in battle areas for a greater length of time and have a greater ability to exploit weather conditions to their advantage.
- Elimination of huge funnels. That provides more room for such items as a big, powerful radar.
- Power available upon command. Nuclear reactors eliminate the need to order "more boilers on the line" a half hour before full power is desired. Heat is produced in the nuclear reactor; in turn, steam and power is produced with little delay. Reduction from full power to one-third or stop is equally responsive.
- Reduced maintenance. The absence of corrosive stack gases cuts down on the wear and tear of the ships and a lot of at-sea and in-port repairs.

The Navy has been advancing in other areas of the surface fleet as well. An example is the new amphibious assault ships (LHAs). The LHAs are the largest and fastest amphibious ships in the Navy inventory and offer the greatest operational versatility in the history of amphibious warfare.

The size of the LHAs alone is impressive. The first of the LHAs, the USS *Tarawa*, is 820 feet long and 106 feet wide. The high point of its mast is 221 feet above the keel, and it has a full displacement of 39,300 tons. It can carry a large landing force with all its equipment and supplies, landing them either by helo or amphibious craft or both. The primary advantage of these general-purpose assault ships is tactical integrity—getting a balanced force to the same point at the same time.

Spruance-class ships are the Navy's prime ASW destroyers. They are fitted with our most powerful sonar, helicopters, our best ASW weapons, and the Harpoon surface-to-surface missile system.

The most recent additions to the surface fleet are the Ticonderoga-class cruisers and the Arleigh Burke-class destroyers. Both are powered by gas turbines and are capable of high-speed transits. They are also outfitted with the Navy's new Aegis weapons system. That system has the capability to track and engage multiple targets, using a complex system of radars, missiles, guns, torpedoes, and self-defense systems. These capabilities make these cruisers and destroyers the most survivable units of today's surface fleet.

Our ability to quickly deploy large carrier battle groups and surface action groups quickly will assure our allies of our ability to exercise sea control. That ability, coupled with the U.S. submarine forces' strategic deterrence objective, will allow the United States and its allies the ability to deter further hostile action worldwide.

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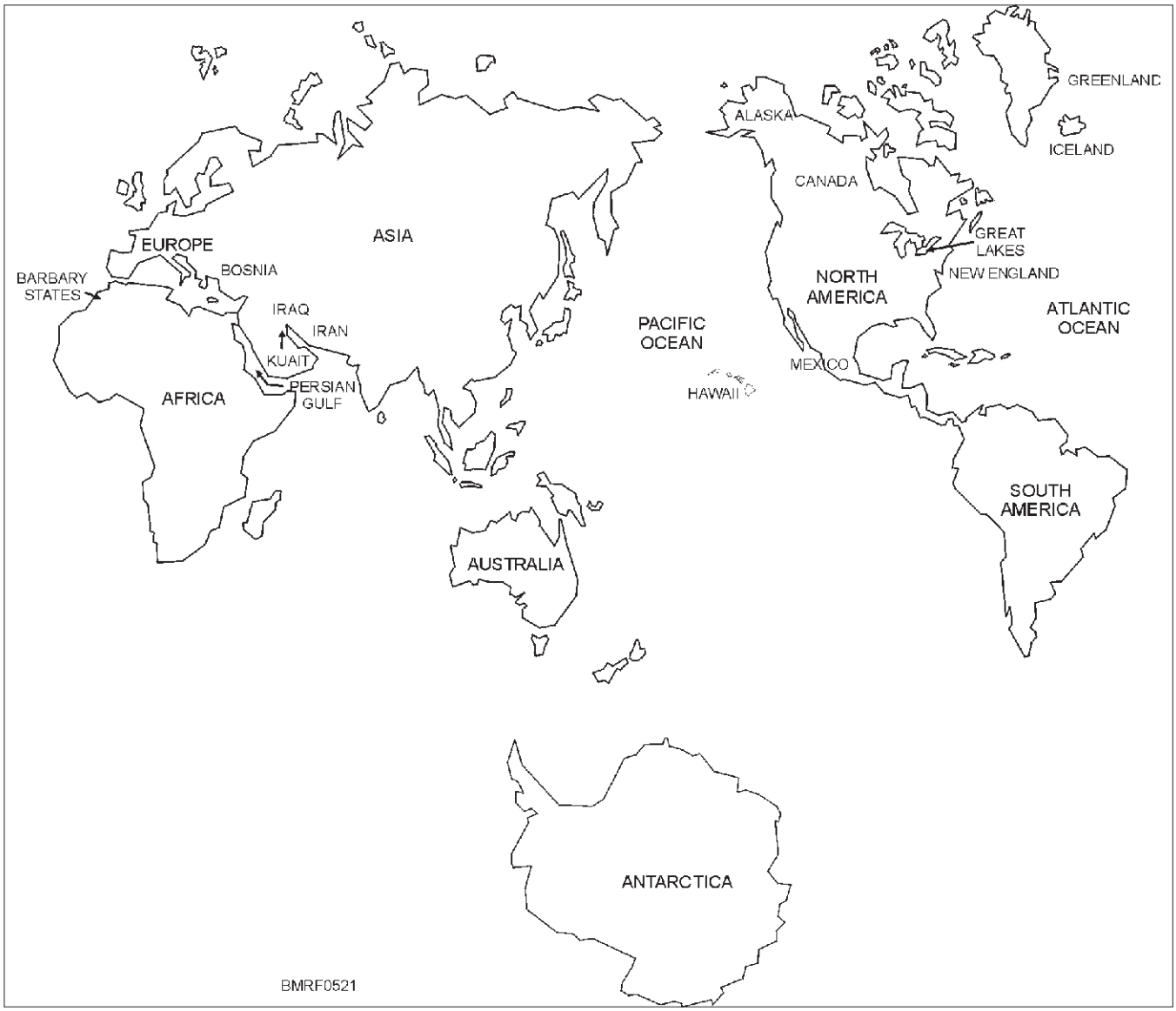

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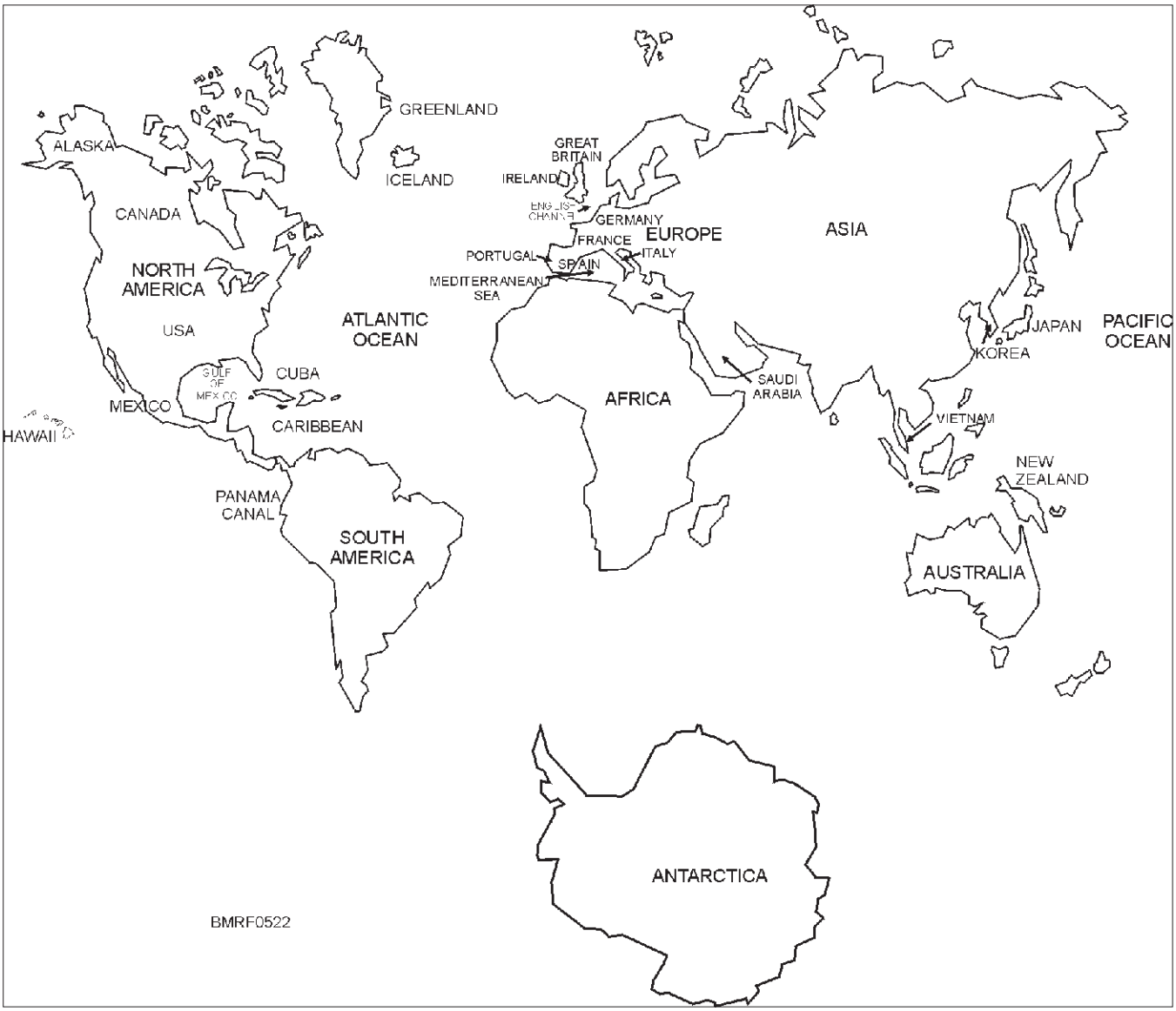

Student Notes:

REVIEW 1 ANSWERS

A1. The United States Navy was formed because **the Second Continental Congress realized that the survival of the colonies as independent from England depended on the formation of naval forces.**

A2. During the late 18th century, battleships were classified as **ships-of-the-line**.

A3. The craft developed in 1775 was **a warfare submarine, named the *Turtle*, and invented by David Bushnell**.

A4. This raid was the **first amphibious operation carried out by the American Navy and Marines**.

A5. The first official recognition of the American Stars and Stripes flag by a foreign nation was given by (a) **France** (b) to the **USS *Ranger***.

REVIEW 2 ANSWERS

A1. After the Revolutionary War, **the U.S. Navy defended America's small merchant ship fleet from the Barbary pirates**.

A2. Between the Revolutionary War and the War of 1812, the U.S. Navy was involved with the—

a. **Quasi War with France** and

b. **Barbary States War**.

A3. Lord Nelson said that the **operation executed by LT Stephen Decatur and 84 seamen by slipping into the harbor of Tripoli and burning the captured frigate *Philadelphia*** was "one of the most bold and daring acts of the age."

A4. Two actions of the U.S. Navy during the War of 1812 were—

a. **The sea battle between the American frigate USS *Constitution* and the British frigate G*uerriere*** and

b. **The victory of Captain Oliver Hazard Perry over the British squadron on Lake Erie**.

A5. During the Mexican-American War, the Navy **blockaded the port cities on the Gulf** and the "**Mosquito Fleet" provided protective action during the first large-scale amphibious operation in U.S. military history**.

REVIEW 3 ANSWERS

A1. During the last part of the 19th century, naval developments included—

a. **Introduction of ironclad ships**

b. **Introduction of riverboats, rams, and gunboats**

c. **Development of submarines**

d. **Construction of steeled-hull protected cruisers, signaling the end of the ironclads**

e. **Development of self-propelled torpedo and long-range torpedo boats**

f. **Development of the internal combustion engine for ships**

A2. After developing the ironclad, the Confederate Navy developed the **submarine**.

A3. During the Civil War **Battle of Mobile bay**, **Admiral Farragut** gave order, "Damn the torpedoes! Full speed ahead."

A4. Alfred T. Mahan influenced naval strategy through his books that stressed the idea that **without control of the seas, a nation couldn't expect victory. He was one of the first instructors at the Naval War College and shared his knowledge on sea power and the importance of understanding naval needs**.

A5. The Spanish-American war began when the ***Maine* was blown up and 250 Sailors were killed.**

A6. **Commander George Dewey** was instrumental in quickly ending the Spanish-American War.

REVIEW 4 ANSWERS

A1. The development of **airplanes** occurred at this time.

A2. The U.S. Navy was deployed to **stop German U-boats from practicing unrestricted warfare and terrorizing the seas**.

A3. During this war, **destroyers were used as the main defense against German U-boats. They**

also served as an escort for troop ships and supply convoys for the allies.

A4. During this war, the air forces **supported surface antisubmarine forces**.

A5. During this war, **women enlisted in the Navy as Yeoman (F), releasing enlisted men for active service at sea**.

REVIEW 5 ANSWERS

A1. The Battle of Coral Sea was fought by **aircraft, all of which were launched from carriers. This battle saved Australia from being invaded by the Japanese**.

A2. The major naval battles in the Pacific during World War II and their significance is as follows:

a. **Battle of Guadalcanal—The Solomon Islands came under allied control and the danger of Australia coming under Japanese attack was lessened**

b. **Battle of the Philippine Sea—Heavy losses of ships, aircraft, and pilots paralyzed the Japanese Fleet**

c. **Battle of Leyte Gulf**—Deciding blow to the Japanese Navy. Losing control of the Philippines meant that the Japanese homeland was cut off from its main source of supplies from the south.

d. **Battle of Midway—The turning point of the war in the Pacific**.

e. **The Battles of Okinawa and Iwo Jima—Defeat of the Japanese in these battles signaled an approach to the end of the war.**

A3. During World War II, the U.S. Navy **protected convoys bound for Europe from German U-boat attack**.

A4. Some of the types of ships that changed the shape of the Navy changed during World War II include **landing ships, frigates, attack cargo ships, transport ships, barracks ships, net tenders, repair ships, radar pickets minelayers, and mine sweepers.**

A5. On 30 Jul 1943, **Congress authorized the establishment of the Women's Reserve to fill acute shortages of personnel during World War II**.

A6. The Women's Armed Services Integration Act **abolished the Women's Reserve and gave women full partnership in the Navy**.

REVIEW 6 ANSWERS

A1. Some of the Navy's roles during the Korean Conflict included—

a. **Providing close air support to knock out bridges and block enemy routes with the use of jets from carriers**

b. **Navy helicopters spotted enemy artillery**

c. **Navy ships supported the amphibious landing at Inchon through massive shore bombardment before ground forces landed**

d. **The Navy successfully used its battleships to intervene in ground operations far ashore.**

A2. Some of the Navy's missions during the Vietnam Police Action included—

a. **Surface ship-based gunfire support**

b. **Carrier-based aircraft operations**

c. **Coastal interdiction patrols against the enemy**

A3. Other actions the Navy was involved with during the same timeframe as the Vietnam Police Action include—

a. **The manned space exploration program**

b. **Manned undersea exploration, using deep submergence vehicles and underwater laboratories**

A4. During the Iraq – Iran War, **the Navy escorted and protected oil tankers in transit to and from the Persian Gulf against Iranian attacks**.

A5. The Navy's contributions during Operation Dessert Storm included—

a. **Providing sea control**

b. **Naval gunfire support for sea to ground forces**

c. Surface and subsurface missile attacks on selected targets in Iraq

CHAPTER COMPREHENSIVE TEST

1. What date commemorates the birthday of the United States Navy?

    1. 5 Sep 1774
    2. 13 Oct 1775
    3. 4 Jul 1776
    4. 14 Feb 1778

2. The Second Continental Congress approved the purchase of how many vessels?

    1. Eight
    2. Six
    3. Four
    4. Two

3. Which of the following were naval vessels in the early 19th century?

    1. Frigates
    2. Sloops of war
    3. Ships of the line
    4. All of the above

4. What category of ship carried the largest number of guns?

    1. Ships of the line
    2. Sloops of war
    3. Schooners
    4. Frigates

5. What type of ships did privateers typically sail?

    1. Ships of the line
    2. Sloops of war
    3. Schooners
    4. Frigates

6. What ship was the first warfare submarine?

    1. *Turtle*
    2. *Hornet*
    3. *Alfred*
    4. *Wasp*

7. Which of the following ships has the distinction of being the U.S. Navy's first flagship?

    1. *Providence*
    2. *Hornet*
    3. *Alfred*
    4. *Wasp*

8. What skipper captured 11 British ships off Newfoundland and sent them back to the States?

    1. John Barry
    2. John Manley
    3. Abraham Whipple
    4. John Paul Jones

9. What country was the first to recognize the "Stars and Stripes"?

    1. Germany
    2. France
    3. Spain
    4. Portugal

10. John Paul Jones is often referred to as the "father of our highest naval traditions" because of the example he set as an officer during the Revolutionary War. He is also famous because of which of the following accomplishments?

    1. His appointment as the first U.S. Navy admiral
    2. His selection as the first commander in chief
    3. His victory over the HMS *Serapis*
    4. His capture of the HMS *Nancy*

11. At various times during the Revolutionary War, the U.S. Navy had 56 vessels. What was the peak number of vessels that were operating at any one time?

    1. 45
    2. 32
    3. 27
    4. 15

12. Approximately how many ships did the British loose to privateers?

    1. 1,000
    2. 1,500
    3. 2,000
    4. 2,500

13. What is the oldest U.S. Navy ship still in commission?

    1. *Lexington*
    2. *Constitution*
    3. *Constellation*
    4. *Bonhomme Richard*

14. Who was president when the U.S. Navy Department was established?

    1. George Washington
    2. Thomas Jefferson
    3. James Madison
    4. John Adams

15. When did the expression "Millions for defense, but not one cent for tribute" originate?

    1. During the Revolutionary War
    2. During the Quasi War
    3. During the War of 1812
    4. During the Barbary States War

16. Who led the naval forces into Tripoli Harbor and destroyed the captured US frigate USS *Philadelphia*?

    1. Stephen Decatur
    2. James Lawrence
    3. Thomas Truxtun
    4. Edward Preple

17. The War of 1812 was caused, in part, by the efforts to accomplish which of the following goals?

    1. Establishing a naval base in the Mediterranean
    2. Paying ransom payments to the Barbary States
    3. Stopping forced service of American seamen in the British navy
    4. Forcing France to establish trade relations with the United States

18. During the War of 1812, what ship earned the nickname "Old Ironsides"?

    1. *Chesapeake*
    2. *Constitution*
    3. *Constellation*
    4. *Enterprise*

19. On which of the following Great Lakes did Captain Oliver Hazard Perry defeat a British squadron, cutting British supply lines?

    1. Lake Superior
    2. Lake Michigan
    3. Lake Huron
    4. Lake Erie

20. What ship was one of the first ships-of-the line?

    1. *Constitution*
    2. *Enterprise*
    3. *Philadelphia*
    4. *North Carolina*

21. The first half of the 19th century saw a development that was to change navies all over the world. What was that development?

    1. Task forces
    2. Steam power
    3. Steel hulls
    4. Practical submarines

22. In 1843, what invention incorporated in the USS *Princeton* paved the way for progress in the development of propulsion systems?

    1. The screw propeller
    2. The diesel engine
    3. The coal-fired boiler
    4. The stern paddle wheel

23. In 1854, Commodore Perry signed a treaty that opened up what market to American trade?

    1. China
    2. Japan
    3. Russia
    4. India

24. Although neither side could claim victory, the battle between the USS *Monitor* and the *Virginia* (*Merrimack*) was important for which of the following reasons?

    1. Steam engines were used in battle for the first time
    2. The Dahlgren gun was used
    3. The battle began the era of the ironclads
    4. The Union and Confederate navies fought each other

25. The first true submarine attack was conducted against what Union ship?

    1. USS *New Ironsides*
    2. USS *Housatonic*
    3. USS *Hunley*
    4. USS *Custis*

26. During what Civil War battle was the order "Damn the torpedoes! Full speed ahead!" given?

    1. Vicksburg
    2. Mobile Bay
    3. New Orleans
    4. Kings Bay

27. What person defined sea power, showed the importance of knowing naval needs, and advocated a large, powerful Navy?

    1. Commodore Perry
    2. Admiral Farragut
    3. Andre Foote
    4. Alfred T. Mahan

28. What ship has been labeled as the first modern cruiser in the U.S. Fleet?

    1. USS *Boston*
    2. USS *Atlanta*
    3. USS *Newark*
    4. USS *Chicago*

29. "Remember the Maine," referring to the USS *Maine*, was the battle cry for which of the following wars?

    1. The Quasi War
    2. The Civil War
    3. The Spanish-American War
    4. World War I

30. In what year did the Navy accept its first operational submarine?

    1. 1895
    2. 1898
    3. 1900
    4. 1902

31. Construction of our first destroyer began in what year?

    1. 1895
    2. 1899
    3. 1902
    4. 1905

32. What ship was considered our first "first-class" battleship?

    1. USS *Indiana*
    2. USS *New York*
    3. USS *Texas*
    4. USS *California*

33. Who was the Navy's first aviator?

    1. Lt. Ellyson
    2. Lt. Towers
    3. Lt. Corry
    4. CAPT Chambers

34. Destroyers were first used effectively for antisubmarine warfare during what war?

    1. Civil War
    2. Spanish-American War
    3. World War I
    4. World War II

35. In what war did women first serve as members of the Navy?

    1. Civil War
    2. Spanish-American War
    3. World War I
    4. World War II

36. In what capacity did women first serve as members of the Navy?

    1. Nurse
    2. Yeoman
    3. Radio operator

37. What was the first aircraft carrier designed from the keel up?

    1. USS *Ranger*
    2. USS *Hornet*
    3. USS *Yorktown*
    4. USS *Enterprise*

38. What was the first naval battle of World War II in which two opposing fleets didn't see each other during combat?

    1. The Battle of Midway
    2. The Battle of Okinawa
    3. The Battle of Guadalcanal
    4. The Battle of the Coral Sea

39. What was the decisive battle of World War II that became the turning point of the war in the Pacific?

    1. The Battle of Midway
    2. The Battle of Okinawa
    3. The Battle of Guadalcanal
    4. The Battle of the Coral Sea

40. During World War II, the Japanese loss/losses of what island(s) heralded the end of the war in the Pacific?

    1. Philippines
    2. Solomons
    3. Guadalcanal
    4. Iwo Jima

41. During World War II, the Navy was heavily involved in which of the following Atlantic (European) actions?

    1. The invasion of Normandy
    2. The capture of Navaronne
    3. The Battle of Britain
    4. The fall of Berlin

42. Which of the following were types of ships built during World War II?

    1. Net tenders
    2. Mine sweepers
    3. Repair ships
    4. All of the above

43. Which of the following combat systems came into full use during World War II?

    1. Radar
    2. Sonar
    3. Both 1 and 2 above
    4. SATNAV

44. During World War II, WAVES were eligible for how many ratings?

    1. 28
    2. 30
    3. 34
    4. 40

45. In what year was the Women's Armed Services Integration Act passed?

    1. 1942
    2. 1945
    3. 1948
    4. 1951

46. The first extensive use of jet aircraft and helicopters occurred during what war?

    1. World War I
    2. World War II
    3. The Korean Conflict
    4. The Vietnam Police Action

47. The first U.S. Navy nuclear-powered vessel was what type of ship?

    1. Carrier
    2. Submarine
    3. Merchant ship
    4. Guided-missile cruiser

48. In what year did the USS *Nautilus* make its history-making transpolar voyage?

    1. 1952
    2. 1955
    3. 1958
    4. 1961

49. In what year were the first nuclear-powered surface ships launched?

    1. 1952
    2. 1955
    3. 1958
    4. 1961

50. In what year was the first American satellite placed in orbit?

    1. 1952
    2. 1955
    3. 1958
    4. 1961

51. America's first suborbital flight was made by what Navy officer?

    1. Commander Conrad
    2. Commander Gordon
    3. Commander Shepard Jr
    4. Commander Kerwin

52. Which of the following warfare tactics was used during the Vietnam Police Action?

    1. Gunfire support
    2. Riverine operations
    3. Coastal interdiction
    4. Each of the above

53. Which of the following ships was the world's first nuclear-powered carrier?

    1. USS *Nimitz*
    2. USS *Carl Vinson*
    3. USS *Enterprise*
    4. USS *Abraham Lincoln*

54. What moon mission was completely manned by Navy personnel?

    1. *Apollo* 5
    2. *Apollo* 7
    3. *Apollo* 11
    4. *Apollo* 12

55. In what year was the *Alvin*, a deep diving vehicle, tested at 6,000-foot depths?

    1. 1961
    2. 1965
    3. 1969
    4. 1971

56. In what year was the first nuclear-powered, deep-submergence research and ocean-engineering vehicle launched?

    1. 1961
    2. 1965
    3. 1969
    4. 1971

57. Which of the following is/are principle development(s) of the Trident system?

    1. A nuclear-powered fleet ballistic missile submarine
    2. A strategic weapons system
    3. An integrated logistics support system
    4. All of the above

58. Which of the following are the most recent additions to the surface fleet?

    1. Ticonderoga-class cruisers
    2. Arleigh Burke-class destroyers
    3. Both 1 and 2 above
    4. LHAs

59. The Navy helped move approximately how many pounds of equipment and supplies during Desert Shield/ Desert Storm?

    1. 12.4 billion tons
    2. 15.8 billion tons
    3. 18.3 billion tons
    4. 21.6 billion tons

Student Notes: